

REMARKS

The Official Action dated October 2, 2006 has been received and its contents carefully noted. For the reasons discussed in detail hereinbelow, it is respectfully requested that the rejections of record be reconsidered and withdrawn by the Examiner and that claims 1-4 be allowed and that the application be passed to issue.

Claims 1-4 are presently pending for consideration, of which claim 1 is independent.

In the detailed Office Action, claims 1-3 stand rejected under 35 U.S.C. §103(a) as unpatentable over Cross II et al. ("Control Structure Diagrams for Ada 95", 1996 – hereafter Cross II) in view of Hendrix et al. ("Visual Support for Incremental Abstraction and Refinement in Ada 95", 1998 – hereafter Hendrix). Also, claim 4 stands rejected under 35 U.S.C. §103(a) as unpatentable over Cross II in view of Hendrix. These rejections are respectfully traversed at least for the reasons provided below.

In the rejections of claims 1-4 over Cross II and Hendrix, the Examiner interprets Control Structure Diagrams (CSD's) of Hendrix to be equivalent to Applicant's "outline-display frames" and the structure of the CSD as shown in Fig. 2 of Hendrix as equivalent to Applicant's "outline-display frames connected by lines forming an inverted tree hierarchical structure". The Examiner then interpreted Hendrix as teaching displaying an expanded view on the display screen containing source codes of each respective outline-display frame upon the activation of the expanded view of the respective outline-display frame by an input device so that the source codes of the program is displayed with clarity for viewing.

Applicant respectfully submits that neither Cross II nor Hendrix teaches, discloses or suggests the outline-display frames of the claimed invention. In the CSD of Cross II and Hendrix, a functional block of source code is surrounded by a box denoting the function of the box. The source code can then be viewed either in code form or in functional block form. However, in Applicant's claimed invention, the outline-display frames show a main program, subroutines, and their relationship (see Specification, p. 7, ln. 11 to p. 8, ln. 14).

Additionally, Applicant respectfully submits that neither Cross II nor Hendrix teaches, discloses or suggests the inverted tree structure of the claimed invention. As noted in previous responses, Applicant repeats the distinguishing feature of Applicant's claimed inverted tree structure compared with the structure of Cross II and Hendrix. Specifically, Cross II and Hendrix teach multi-level or nested loops identified by vertical lines identifying each nested level of nested loops and a CSD unit symbol identifying a routine or a functional

module (see Fig. 2), where the source codes with nested loops shown in Hendrix are made easier to read by using CSD's to label and show structural and control information for each module and to allow control structures, such as loops, to be selectively displayed by hiding or folding portions of nested loops, thereby improving the readability of a long program. Hendrix's Fig. 2 merely shows multi-level or nested loops identified by vertical lines identifying each nested level of nested loops and a CSD unit symbol identifying a routine or a functional module. That is, the source codes with nested loops shown in Hendrix are made easier to read by using CSD's to label and show structural and control information for each module and to allow control structures, such as loops, to be selectively displayed by hiding or folding portions of nested loops thereby improving the readability of a long program.

By contrast, in Applicant's claimed invention, each outline-display frame can be expanded to show the source code in an expanded view. The structure of the multiple outline-display frames and multiple expanded views is an inverted tree structure, having multiple branches and many leaves upon each branch. Because the relationship of each subroutine to the main program is shown diagrammatically in Applicant's claimed invention, (see Fig. 1), each branch may have multiple sub-branches, similar to a tree in structure. Further, Hendrix and Cross II only show that source codes or blocks of source codes are displayed or listed in a sequential manner. That is, Hendrix does not teach, disclose or suggest an inverted tree hierarchical diagram of a program such as shown in Applicant's Fig. 1 or recited in claim 1 of the present invention. For example, Hendrix method does not and cannot show block or frame 105 connected to a higher level block or frame 101 as shown in Fig. 1 of Applicant's disclosure. Likewise, Hendrix does not and cannot show block or frame 103 connected to block or frame 101.

Finally, Applicant respectfully submits that neither Cross II nor Hendrix teaches, discloses or suggests showing the expanded view of each respective outline-display frame simultaneously on the same display screen as the inverted tree hierarchical structure of the program, as is recited in claim 1. In Hendrix, a user can optionally select to view a "landscape" view alongside the source code view (see p. 155-156). The highly compressed view of the CSD and/or source code is shown in a companion window displayed alongside the ordinary CSD and/or source code window. This is different than the claimed invention of claim 1, where the outline-display frames are shown with expanded views simultaneously on the same display screen.

Because Cross II and Hendrix, either alone or in combination, do not teach or suggest each and every element of independent claim 1, Applicant respectfully submits that Cross II and Hendrix do not render claim 1 unpatentable.

The arguments set forth above with respect to claim 1 are also applicable to the rejection of claims 2-4 over Cross II and Hendrix.

Additionally, with respect to claim 2, neither Hendrix nor Cross II teach, disclose or suggest an argument frame displayed in vicinity of a respective frame in a displayed program inverted tree hierarchical structure, as amended in claim 2. Applicant respectfully asserts that Fig. 2 of Cross does not show any box/block/frame, if the module of source code in Fig. 2 is considered as equivalent to Applicant's frame.

With respect to the rejection of claim 3, the Examiner alleges that Fig. 3 of Hendrix teaches changing thickness of frame line before and after expansion. However, as previously Fig. 3 of Hendrix merely shows an example of a CSD folding symbol with thick and thin lines drawn in the same symbol block, and there is no relation between Fig. 3 and Fig. 6 showing the changing in thickness of any lines when the block is expanded. Further, the purpose of showing different line thicknesses in the CSD folding symbol in Fig. 3 appears to have no relation to improving the understandability of the folding symbol.

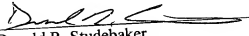
With respect to the rejection of claim 4, the Examiner alleges that Fig. 6 of Hendrix teaches displaying a most recently activated expanded view of the respective outline-display frame on top of other expanded views of outline-display frames. However, Fig. 6 of Hendrix merely shows an example of a folding CSD structure, where parts of the CSD are folded and parts are expanded. By contrast, in applicant's claimed invention, multiple expanded views can be opened on a single display screen, with the most recently activated expanded view shown on top of the less recently activated expanded views (see Fig. 2).

The requirements for establishing a *prima facie* case of obviousness, as detailed in MPEP § 2143 - 2143.03 (pages 2100-122 - 2100-136), are: first, there must be some suggestion or motivation, either in the references themselves or in the knowledge generally available to one of ordinary skill in the art, to modify the reference to combine the teachings; second, there must be a reasonable expectation of success; and, finally, the prior art reference (or references when combined) must teach or suggest all of the claim limitations. As Cross II and Hendrix are deficient as discussed above, their combination in the pending §103(a) rejections is improper.

Because Cross II and Hendrix, either alone or in combination, do not teach or suggest each and every element of claims 2-4, Applicant respectfully submits that Cross II and Hendrix do not render claims 2-4 unpatentable.

In view of the foregoing discussion, Applicant respectfully requests reconsideration and withdrawal of the pending rejections, and that the application be passed to issue. If a conference would expedite prosecution of the instant application, the Examiner is hereby invited to telephone the undersigned to arrange such a conference.

Respectfully submitted,


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